We Claim:

1. A method for autodiscriminating and decoding a bar code symbol that may be of any of a plurality of different types using an optical reading apparatus of the type having an image data memory and a list of parameters that specify the operating mode of said reading apparatus, said plurality of different types of bar code symbols including 1D linear bar code symbols, and 2D matrix bar code symbols, said 2D matrix bar code symbols having finder patterns that may be of any of a plurality of different types, comprising the steps of:

(a) reading said bar code symbol with said reading apparatus to produce a set of image data therefrom;

(b) storing the set of image data resulting from said scanning step in said image data memory;

(c) sequentially attempting to decode said set of stored image data as a 1D bar code symbol in accordance with a plurality of different 1D decoding programs, and

1.) if one of said attempts to decode said symbol as a 1D symbol is successful, outputting decoded data and then discontinuing said attempt; or

2.) if said attempts to decode said symbol as a 1D symbol are not successful, discontinuing said attempts and proceeding to step (d) hereof;

(d) sequentially attempting to decode said symbol as a 2D symbol in accordance with a plurality of different 2D decoding programs, and

1.) if one of said attempts to decode said symbol as a 2D symbol is successful, outputting decoded data and then discontinuing said attempt; or

2.) if said attempts to decode said symbol as a 2D symbol are not successful, or if none of said types of finder patterns is found, discontinuing said attempts;

(e) wherein step (c) includes the steps of not attempting to decode said symbol in accordance with any one or more 1D decoding programs that are indicated to be disabled by said list of parameters; and

(f) wherein step (d) includes the steps of not attempting to decode said symbol in accordance with any one or more 2D decoding programs that are indicated to be disabled by said list of parameters.

2. The method of claim 1, in which said list of parameters includes a parameter which, when disabled, disables all of said 2D decoding programs.

3. The method of claim 2, in which said list of parameters includes a parameter which, when disabled, disables all of said 2D decoding programs.

4. The method of claim 1, in which said list of parameters includes parameters that specify corresponding scanning-decoding modes in which different respective relationships are established between said scanning steps and said decoding steps.

5. The method of claim 4, in which said scanning-decoding modes include at least one tracking mode.

6. The method of claim 4, in which said scanning-decoding modes include a plurality of non-tracking modes.

7. The method of claim 4, in which said scanning-decoding modes include at least one tracking mode and at least one non-tracking mode.

8. The method of claim 4, in which at least one of said parameters specifies a One Shot scanning-decoding mode.

9. The method of claim 4, in which at least one of said parameters specifies a Repeat Until Done scanning-decoding mode.

10. The method of claim 4, in which at least one of said parameters specifies a Repeat Until Stopped scanning-decoding mode.

11. The method of claim 1, in which said list of parameters includes a multiple symbols parameter which, when enabled, causes said reading apparatus to attempt to decode more than one symbol from a single set of image data.

12. The method of claim 1, further including the step of programming said reading apparatus so that a user may change said list of parameters by presenting a menu symbol to the reading apparatus.

13. The method of claim 1, including the further step of periodically testing for the receipt of a reprogram command generated by an external data source and, if a reprogram command is received, interrupting

steps (a) through (f) to allow said external data source to modify said 1D and 2D decoding programs and said list of parameters.

14. A method as set forth in claim 1, in which said reading apparatus is a reading apparatus of the type including a menuing program that allows a user to change said list of parameters by presenting machine readable menu symbols to the apparatus, including the further steps of periodically testing for the receipt of a reprogram command generated by an external data source and, if a reprogram command is received, allowing said external source to alter said menuing program.

15. A method as set forth in claim 1, in which said reading apparatus of the type including a menuing program that allows a user to select at least one vector processing operation by presenting a respective machine readable symbol to the apparatus.

16. In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

scanning means for scanning said indicia and generating image data indicative of the data encoded therein;

a parameter memory space for storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space for storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing means for executing a plurality of decoding programs in an attempt to decode said image data, said processing means being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

17. The reading apparatus of claim 16, in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

18. The reading apparatus of claim 17, in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.

19. In a reading apparatus for scanning and decoding image data that is encoded in one of a plurality of types of optically readable indicia, in combination:

an imaging assembly including a solid state image sensor reading said indicia and generating image data indicative of the data encoded therein;

a parameter memory space storing a list of parameters including a plurality of parameters that define the operating modes of said apparatus, said list of parameters including a plurality of code options that identify the decoding programs that are and are not enabled for use during decoding;

a menuing memory space storing a menuing program which enables a user at least to modify said list of parameters;

an I/O device through which a data source external to the reading apparatus may transmit reprogram requests and program data to said apparatus;

processing means for executing a plurality of decoding programs in an attempt to decode said image data, said processing means being programmed to respond to a reprogram request initiated by said external data source and to receive program data communicated by said external data source;

whereby said external data source may modify at least one of said list of parameters, said menuing program and said decoding programs.

20. The reading apparatus of claim 19 in which said decoding programs form parts of a 1D/2D autodiscrimination program, and in which said reading apparatus is adapted to receive from said external data source program data which modifies at least one of said decoding programs.

21. The reading apparatus of claim 20 in which said list of parameters includes parameters specifying which of a plurality of scanning-decoding relationships are to exist between the scanning and decoding activities of said reading apparatus during the execution of said 1D/2D autodiscrimination program.